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10/024,687	12/14/2001	Joseph Robert Cleveland	SAMS01-00169	2991

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P.O. Drawer 800889  
Dallas, TX 75380

EXAMINER
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AHMED, SALMAN

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/024,687

Applicant(s)

CLEVELAND ET AL.

Examiner

Salman Ahmed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/6/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 37-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 54-68 is/are allowed.
- 6) ☒ Claim(s) 37-39 and 42-51 is/are rejected.
- 7) ☒ Claim(s) 40, 41, 52 and 53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/7/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

Claims 37-68 are pending.

Claims 37-39 and 42-51 are rejected.

Claims 54-68 are allowed.

Claims 40-41 and 52-53 are objected to.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 42-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Reziifar et al. (US Pat No. 6,377,809.) The claim utilizes the language, "capable of" for describing the first/second base stations. The phrase, "capable of" does not require all of the details that follow it, in other words, the base stations do not require to explicitly show/do all the steps of limitations of the claims, as long as they are capable of doing the steps. The rejection below relies on a reasonably broad interpretation of the claim, taking into account the "capable of" language present in the claim.

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Regarding claims 42-48, Reziifar et al. teach for use in a wireless network communications system, an apparatus for increasing a data transmission rate during handing off (col 1-2, lines 62-15.), said, apparatus comprising: a first base station, second base station (See Fig. 2, 5A,B). Reziifar et al. teaches a first base station capable of sending data packets to a second base station on a first channel at a first data rate; second base station is capable of sending data packets to a mobile station on a second channel; first base station is capable of receiving a negative acknowledgment signal from mobile station that mobile station failed to correctly receive at least one data packet from second base station; first base station and second base station are capable of sending one replacement data packet to mobile station on second channel at a second higher data rate which is higher than first data rate; and one replacement data packet replaces one of: a missing data packet and an error data packet.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 37-39 and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Felix et al. (US Pat 5,966,384), in view of Chen et al. (6,101,168.)

Regarding claims 37 and 49, Felix et al. teach for use in a wireless network communications system, a method and an apparatus for increasing a data transmission rate in a mobile wireless communication channel during hand off (See Fig. 6, Felix et al.), said method and apparatus comprising the steps of: sending data packets from a base station to a mobile station on a first channel at a first data rate; (Felix et al. teach sending the data from base station at a first data rate on the first bandwidth as the supplemental channel. See col 4, lines 1-30.) receiving a negative acknowledgment signal from said mobile station that said mobile station failed to correctly receive at least one data packet; (See col 4, lines 42-54.) sending at least one replacement data packet to said mobile station on said second channel at a second data rate (While the interruption or timeout occurs, retransmission would utilize the fundamental channel, which would be considered as second channel at a second data rate. See col 4, lines 1-50.)

Felix et al. does not specifically teach retransmitting data on the second data rate which is higher than the first data rate and communicating with a replacement data packet controller capable of receive at least one replacement data packet to replace an error or missing packet.

However, Chen teaches retransmission on an additional traffic channel which is independent of the traffic channel used to transmit the new packet (See col 3, lines 28-34, Chen.) Chen further teach sending retransmission with less energy per bit, and this often would result with higher data rate (Considering the trade off between operation range and data rate). (See col 3, lines 35-45, Chen.) Therefore, the system taught by Chen also capable of sending retransmission with higher data rate. Chen further teach retransmission because the packet received in error and obviously retransmission is used to replace the error packet (See col 2-3, lines 57-22, Chen.) Since Felix also teach sending the data with two different channel, and Chen teach the link are capable of data transmission at variable data rates (col 2, lines 14-18, Chen.) and retransmission for error correction, it would have been obvious to one who has ordinary skill in the art at the time the invention was made to retransmit the data packet with higher data rate in the second channel with retransmission to replace the error data packet because Chen teach the method to improve throughput rate for overall transmission, including new data and retransmission data (See col 3, lines 20-22.)

Regarding claims 38 and 50, Chen teach retransmission only occur if NACK message is received; thus, if acknowledgement is received, the retransmission would be terminated.

Regarding claims 39 and 51, Chen and Felix both teach channel could fundamental channel or supplemental channel (See Fig. 1, Felix, Fig. 4, Chen.)

***Allowable Subject Matter***

5. Claims 54-68 are allowed (See previous office action dated 06/01/2006).
6. Claims 40-41, 52-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments, see page 16 of the Remarks section, filed 9/6/2006, with respect to the objection to the claims 37, 42, 49, 54, 61, and 65 have been fully considered and are persuasive. The objections have been withdrawn.
8. Applicant's arguments see pages 16-21 of the Remarks section, filed 9/6/2006, with respect to the objection to the claims have been fully considered and are not persuasive.

In regards to claims 37 and 49, Applicant argues (see pages 17-19, specifically page 19 second paragraph) that Felix fails to teach or disclose the limitations of sending at least one replacement data packet to said mobile station on a second channel at a second higher data rate; and communicating with a replacement data packet controller capable of receiving said at least one replacement data packet from said base station and incorporating said at least one replacement data packet into a data

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packet stream to replace one of: a missing data packet and an error data packet. However, the Examiner respectfully disagrees with the assertion. Felix teaches sending at least one replacement data packet to mobile station on second channel at a second data rate (While the interruption or timeout occurs, retransmission would utilize the fundamental channel, which would be considered as second channel at a second data rate. See col 4, lines 1-50). Felix further teaches (column 5 lines 3-10, In particular, controller 101 will determine the amount of data remaining to be transmitted to remote unit 113, and if there exists less than a predetermined amount of data that needs to be transmitted to remote unit 113, transmission will continue over a fundamental channel, otherwise, transmission of data will continue over the supplemental channel when the supplemental channel again becomes available). Chen teaches (column 12 lines 46-49, the packet received in error is retransmitted on an additional code channel which is available for transmission to the destination device). Chen teaches retransmission on an additional traffic channel which is independent of the traffic channel used to transmit the new packet (See col 3, lines 28-34, Chen.) Chen further teach sending retransmission with less energy per bit, and this often would result with higher data rate (See col 3, lines 35-45, Chen.) Therefore, the system taught by Chen also capable of sending retransmission with higher data rate. Chen teaches (column 15 lines 40-54) the retransmission allows the communication system to operate at a higher frame-error-rate (FER) than nominal because of the ability to correctly decode the packets with a minimal expenditure of system resource, thereby improving the reliability of the data transmission and possibly increasing the capacity of the system. Chen further teach



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retransmission because the packet received in error and obviously retransmission is used to replace the error packet (See col 2-3, lines 57-22, Chen.) Since Felix also teach sending the data with two different channel, and Chen teach the link are capable of data transmission at variable data rates (col 2, lines 14-18, Chen.) and retransmission for error correction, it would have been obvious to one who has ordinary skill in the art at the time the invention was made to retransmit the data packet with higher data rate in the second channel with retransmission to replace the error data packet because Chen teach the method to improve throughput rate for overall transmission, including new data and retransmission data (See col 3, lines 20-22). Chen teaches (column 9 lines 45-55, The packet received in error can be retransmitted concurrently with the new packet in the current frame or at a subsequent frame. Chen teaches communicating with a replacement data packet controller (Figure 8, decoder 210) capable of receiving said at least one replacement data packet from said base station and incorporating said at least one replacement data packet into a data packet stream to replace one of: a missing data packet and an error data packet. (column 6 lines 16-23, Within decoder 210 which is shown in FIG. 8, block de-interleaver 812 reorders the symbols within the demodulated data and provides the de-interleaved data to Viterbi decoder 814. Viterbi decoder 814 convolutionally decodes the de-interleaved data and provides the decoded data to CRC check element 816. CRC check element 816 performs the CRC check and conditionally provides the checked data to data sink 212).

Applicant extensively argues about (see pages 16-19) the establishment of a prima facie case of obviousness by the office. Examiner respectfully points out that the

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test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art at the time the invention was made. See *In re Keller* 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571)272-8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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